

1 CLAIMS

2 What is claimed is:

3 Claim 1. A wireless security, telemetry and control
4 system for a mobile piece of equipment comprising:

5 at least one smart relay unit associated with a selected
6 function of said mobile piece of equipment, said at least one
7 smart relay unit having a means for receiving wireless
8 communication from a main control unit;

9 a main control unit located within said piece of
10 equipment having a means for transmitting wireless
11 communication to said at least one smart relay, said main
12 control unit also having a means of establishing a user ID;

13 whereby said main control unit establishes said user ID
14 and thereafter sends a wireless communication to said smart
15 relay to enable or disable said function of said mobile piece
16 of equipment to which it is associated.

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18 Claim 2. The wireless security, telemetry and control
19 system of Claim 1 wherein means for transmitting wireless
20 communication from said main control unit to said at least
21 one smart relay unit includes a radio frequency transmitter.

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23 Claim 3. The wireless security, telemetry and control
24 system of Claim 1 wherein means for transmitting wireless
25 communication from said main control unit to said at least

1 one smart relay unit includes a low frequency transmitter.

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3 Claim 4. The wireless security, telemetry and control
4 system of Claim 1 wherein means for transmitting wireless
5 communication from said main control unit to said at least
6 one smart relay unit includes an infra red transmitter.

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8 Claim 5. The wireless security, telemetry and control
9 system of Claim 1 wherein said smart relay unit includes a
10 means for transmitting wireless communication to said main
11 control unit, and said main control unit includes a means for
12 receiving wireless communication from said smart relay unit.

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14 Claim 6. The wireless security, telemetry and control
15 system of Claim 5 wherein means for transmitting wireless
16 communication from said at least one smart relay unit to said
17 main control unit includes a radio frequency transmitter.

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19 Claim 7. The wireless security, telemetry and control
20 system of Claim 5 wherein means for transmitting wireless
21 communication from said at least one smart relay unit to said
22 main control unit includes a low frequency transmitter.

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24 Claim 8. The wireless security, telemetry and control
25 system of Claim 5 wherein means for transmitting wireless

1 communication from said at least one smart relay unit to said
2 main control unit includes a infra red transmitter.

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4 Claim 9. The wireless security, telemetry and control
5 system of Claim 5 wherein said main control unit includes a
6 memory for storing said wireless communications received from
7 said smart relay;

8 wherein said stored communications can be downloaded to
9 a external electronic device in electrical communication with
10 said main control unit.

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12 Claim 10. The wireless security, telemetry and control
13 system of Claim 1 wherein said means for establishing a user
14 ID includes at least one electronic key, said electronic key
15 constructed and arranged for electrical communication with an
16 electronic key receiver, said electronic key receiver secured
17 within said mobile piece of equipment and in electrical
18 communication with said main control unit.

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20 Claim 11. The wireless security, telemetry and control
21 system of Claim 10 wherein said electronic key includes a
22 user code in read only memory whereby said user code is
23 programmed into said read only memory via a computer and a
24 writer interface.

1 Claim 12. The wireless security, telemetry and control
2 system of Claim 10 wherein said electronic key includes a
3 user code in random access memory whereby said user code is
4 programmed into said random access memory via a computer and
5 a reader-writer interface.
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7 Claim 13. The wireless security, telemetry and control
8 system of Claim 1 wherein said main control unit includes at
9 least one two-way communication system for transmission of
10 data from said main control unit to a remote base station and
11 transmission of commands from said remote base station to
12 said main control unit.
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14 Claim 14. The wireless security, telemetry and control
15 system of Claim 13 wherein said two-way communication system
16 is a two-way pager system.
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18 Claim 15. The wireless security, telemetry and control
19 system of Claim 14 wherein said two-way pager communication
20 system includes ReFlex type communication protocol.
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22 Claim 16. The wireless security, telemetry and control
23 system of Claim 13 wherein said two-way communication system
24 is a two-way cellular system.
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1 Claim 17. The wireless security, telemetry and control
2 system of Claim 11 wherein said at least one smart relay
3 includes a basic mode wherein said at least one smart relay
4 has normally open electrical contacts and said function of
5 said mobile piece of equipment to which it is associated will
6 not function until said main control unit transmits a allow
7 function signal to said at least one smart relay.

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9 Claim 18. The wireless security, telemetry and control
10 system of Claim 5 wherein said at least one smart relay
11 includes a smart mode wherein said at least one smart relay
12 has normally closed electrical contacts and said smart relay
13 unit monitors for attempted use of said function of said
14 mobile piece of equipment to which it is associated, whereby
15 upon an attempted use of said function said smart relay unit
16 transmits a signal to said main control unit if said main
17 control unit transmits an accepted identification back to
18 said smart relay said function is allowed to operate, if said
19 main control unit transmits an unaccepted identification to
20 said smart relay said smart relay is opened thereby
21 preventing said function from operation;

22 wherein said smart relay mode hides said smart relay
23 from diagnostic equipment and the mobile equipment's on-board
24 computer.

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1 Claim 19. The wireless security, telemetry and control
2 system of Claim 5 wherein said at least one smart relay
3 includes a sensing mode wherein said relay utilizes at least
4 one analog sensor for monitoring a function of the mobile
5 equipment, converts the sensed analog data to a digital
6 signal and transmits said digital data to the main control
7 unit;

8 wherein at least one of the following parameters is
9 sensed and data is transmitted to said main control unit;
10 electrical, speed, pressure, temperature, fluid level, fluid
11 flow, load, opening of the trunk, hood, doors, windows,
12 movement of the vehicle or within the vehicle, ultrasonic,
13 microwave and radar motion, vibration, sound discrimination,
14 differential pressure, electrical switches.

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16 Claim 20. The wireless security, telemetry and control
17 system of Claim 5 wherein said at least one smart relay
18 includes a sensing mode wherein said relay utilizes at least
19 one digital sensor for monitoring a function of the mobile
20 equipment and transmits said sensed digital data to the main
21 control unit;

22 wherein at least one of the following parameters is
23 sensed and data is transmitted to said main control unit;
24 electrical, speed, pressure, temperature, fluid level, fluid
25 flow, load, opening of the trunk, hood, doors, windows,

1 movement of the vehicle or within the vehicle, ultrasonic,
2 microwave and radar motion, vibration, sound discrimination,
3 differential pressure, electrical switches.

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